

REMARKS

Upon entry of the instant amendment, claims 1-6 and 8-10 will remain pending in the above-identified application and stand ready for further action on the merits.

In this Amendment, claim 1 has been amended to recite limitations previously recited in claim 7 (*and claim 7 has been canceled to prevent a redundancy with amended claim 1*).

The present amendments to the claims do not introduce new matter into the application as originally filed, and at the same time serve to put the claims in a proper form for allowance, and/or help to simplify outstanding issues for purposes of Appeal to the USPTO Board of Patent Appeals. As such entry of the instant amendment and favorable action on the merits is earnestly solicited at present.

Claim Rejections under 35 U.S.C. § 103(a)

Claims 1-3, 5 and 7-10 are rejected under 35 U.S.C. § 103(a) as being unpatentable over **Isozaki** (U.S. Patent 6,337,369) in view of **Starzewski** (U.S. Patent 5,670,092).

Claim 4 is rejected under 35 U.S.C. § 103(a) as being unpatentable over **Isozaki** (U.S. Patent 6,337,369) in view of **Starzewski** (U.S. Patent 5,670,092), further in view of **DesMarais et al.** (U.S. Patent 6,362,244).

Claim 6 is rejected under 35 U.S.C. § 103(a) as being unpatentable over **Isozaki** (U.S. Patent 6,337,369) in view of **Starzewski** (U.S. Patent 5,670,092), further in view of **Dempo** (U.S. Patent 5,512,178).

Reconsideration and withdraw of each of the above rejections is respectfully requested based on the following considerations.

Legal Standard for Determining Prima Facie Obviousness

MPEP § 2141 sets forth the guidelines in determining obviousness. First, the Examiner has to take into account the factual inquiries set forth in *Graham v. John Deere*, 383 U.S. 1, 17, 148 USPQ 459, 467 (1966), which has provided the controlling framework for an obviousness analysis. The four *Graham* factors are:

- (a) determining the scope and content of the prior art;
- (b) ascertaining the differences between the prior art and the claims in issue;
- (c) resolving the level of ordinary skill in the pertinent art; and
- (d) evaluating any evidence of secondary considerations.

Graham v. John Deere, 383 U.S. 1, 17, 148 USPQ 459, 467 (1966).

Second, the Examiner has to provide some rationale for determining obviousness. MPEP § 2143 sets forth some rationales that were established in the recent decision of *KSR International Co. v Teleflex Inc.*, 82 USPQ2d 1385 (U.S. 2007). Exemplary rationales that may support a conclusion of obviousness include:

- (a) *combining prior art elements according to known methods to yield predictable results;*
- (b) *simple substitution of one known element for another to obtain predictable results;*
- (c) *use of known technique to improve similar devices (methods, or products) in the same way;*
- (d) *applying a known technique to a known device (method, or product) ready for improvement to yield predictable results;*
- (e) *"obvious to try" – choosing from a finite number of identified, predictable solutions, with a reasonable expectation of success*

- (f) *known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces if the variations are predictable to one of ordinary skill in the art;*
- (g) *some teaching, suggestion, or motivation in the prior art that would have led one of ordinary skill to modify the prior art reference or to combine prior art reference teachings to arrive at the claimed invention.*

As the MPEP directs, all claim limitations must be considered in view of the cited prior art in order to establish a *prima facie* case of obviousness. See MPEP § 2143.03.

The Present Invention

The present invention relates to a method for producing a polarizing film of a polyvinyl alcohol having no polyvinylene structure comprising dipping a polyvinyl alcohol film in/on which iodine is adsorbed and oriented in an aqueous solution containing boric acid in which the contact between the aqueous solution and oxygen is suppressed.

Distinctions Over the Cited Art

Isozaki discloses a polarizing film comprising a polyvinyl alcohol derivative with a polyvinylene structure obtained from a polyvinyl alcohol (PVA), and describes that “(T)he dry-heat stretching is preferably conducted in an oxygen-poor atmosphere such as a nitrogen atmosphere or in vacuum, because there is a possibility of discoloration due to the oxidation of PVA”, when the dry-heat stretching is carried out at a temperature of 100 to 250°C (see column 4, lines 1-11 of Isozaki U.S. Patent No. 6,337,369, which is copied below for the Examiner's convenience).

The stretching temperature for dry-heat stretching is preferably at least 100° C., more preferably at least 120° C., even more preferably at least 140° C. The upper limit of the stretching temperature is preferably 250° C., more preferably 230° C., even more preferably 220° C. If desired, the stretching temperature may be changed, depending on the stretched film condition during stretching. The dry-heat stretching is preferably conducted in an oxygen-poor atmosphere such as a nitrogen atmosphere or in vacuum, because there is a possibility of discoloration due to the oxidation of PVA. The PVA film is converted into a colored film having polarizing properties during the dry-heat stretching.

Isozaki does not disclose the presence of iodine adsorbed and oriented in and/or on the PVA film. In addition, Isozaki does not describe that the film is dipped in an aqueous solution containing boric acid while suppressing the contact between the aqueous solution and oxygen. Accordingly, the method of the present invention is quite patentably distinct from the method of Isozaki.

Starzewski discloses a polarizing film based on polyvinyl alcohol containing polyacetylene as the light-polarizing substance, which is obtainable by stretching a polarizable film 4- to 13-fold to obtain a polarizing film and thereafter treating the film for from 10 seconds up to 60 days at a temperature of between 100°C. and 300°C. with the exclusion of oxygen, wherein the time and temperature of treatment are sufficient to raise the degree of polarization at 400 nm by at least 4% (*see claim 1 of Starzewski U.S. Patent 5,670,092, which is copied below for the Examiner's convenience*).

1. A polarizing film of improved blocking position based on polyvinyl alcohol containing polyacetylene as the light-polarizing substance, obtainable by stretching a polarizable film 4- to 13-fold to obtain a polarizing film and thereafter treating the film for from 10 seconds up to 60 days at a temperature of between 100° C. and 300° C. with the exclusion of oxygen wherein the time and temperature of treatment are sufficient to raise the degree of polarization at 400 nm by at least 4%.

Starzewski does not disclose the presence of iodine adsorbed and oriented in and/or on the PVA film. In addition, Starzewski does not describe that the film is dipped in an aqueous solution containing boric acid while suppressing the contact between the aqueous solution and oxygen. Accordingly, the method of the present invention is quite patentably distinct from the method of Starzewski.

Isozaki and Starzewski describe that the contact between the film and oxygen is suppressed when the film is heated, while the method of the present application suppresses the contact between the aqueous solution containing boric acid and oxygen. (More particularly, the present invention intends to suppress the contact between oxygen and potassium iodide contained in the aqueous treatment solution containing boric acid.)

The suppression of the contact between the aqueous solution containing boric acid and oxygen improves the contrast of the polarizing film. Such an effect is unexpected from Isozaki or Starzewski. Accordingly, the present invention would not have been obvious to one of ordinary skill in the art based on the disclosures of Isozaki in view of Starzewski.

Additionally, it is submitted that no reason or rationale is provided by the cited art of **Isozaki** or **Starzewski** that would allow one of ordinary skill in the art to arrive at the instant invention as recited in instantly pending claims 1-6 and 8-10.

It is also noted that the remaining cited references of **DesMarais et al.** and **Dempo** do not cure the above noted deficiencies of **Isozaki** and **Starzewski**, so that it also follows that each of pending claims 1-6 and 8-10 are also patentable and non-obvious over these cited art references, even when combined with the disclosures of **Isozaki** and **Starzewski**.

Any contentions of the USPTO to the contrary must be reconsidered at once.

Conclusion

Based on the amendments and remarks presented herein, the USPTO is respectfully requested to issue a Notice of Allowance in the matter of the instant application clearly indicating that each one of instantly pending claims 1-6 and 8-10 is allowed and patentable under the provisions of Title 35 of the United States Code.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact John W. Bailey, Reg. No. 32,881 at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

Application No. 10/538,079
Amendment dated January 6, 2009
After Final Office Action of October 6, 2008

Docket No.: 0020-5381PUS1

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.17; particularly, extension of time fees.

Dated: January 6, 2009

Respectfully submitted,

By 

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